Saskatchewan
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Final Report

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Beef Upgrading Management Program

Conducted by Dr. P. Rempel

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FINAL REPORT FOR THE

BEEF UPGRADING MANAGEMENT PROGRAM

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Abstract:

BEEF UPGRADING MANAGEMENT PROGRAM

The Beef Upgrading Management Program was established to develop a commercial beef herd management program. It was to promote the use of records suitable to measure key production indicators against theoretical standards and so identify trends within participating herds. Finally, it was intended to foster a team approach to solve production problems, with access to experts as needed.

While it proved possible to develop the groundwork of a herd management program and to develop a record-keeping system, many participating producers are not yet convinced of the value of individual animal records and complete herd inventories. Further, the motivation of producer and veterinarian and their compatibility must be inherent in the client-veterinarian relationship. Neither can be created externally; both are essential to the success of a herd management program.

EXECUTIVE SUMMARY TO THE

BEEF UPGRADING MANAGEMENT PROGRAM REPORT

The Beef Upgrading Management Program was initiated to develop a management model for cow/calf producers. The steering committee designed a management system based on individual animal records and veterinary consultation.

Of the original 31 beef producers participating in the Beef Upgrading Management Program, 27 have continued and two more producers were recruited later.

Emphasis has been on the collection of individual animal records. Data analysis has been handled through the Beef R.O.P. computer program. This computer program has some deficiencies when applied to commercial beef herd analysis.

Use of herd information worksheets began in 1987. The GOLD computer program is being developed to analyze key production areas for the beef herd. The report from the GOLD program provides a herd summary of the R.O.P. printout.

GOLD analyzes performance by calculating indices for growth, open cows, length of calving interval and death losses.

The majority of commercial beef producers are not prepared to keep individual animal records. However, a record-keeping system emphasizing herd performance is seen to be relevant.

The Alberta Beef Herd Management Manual was adopted to provide a guide for producers and veterinarians in identifying management problems and solving them. The committee made the decision to purchase and distribute the manual rather than prepare a Saskatchewan document.

RESULTS AND IMPACT ON SASKATCHEWAN AGRICULTURE

The Beef Upgrading Management Program identified the elements of commercial beef herd management program. It promoted the use of individual animal records, using the "Cow-Calf Record Book" (Saskatchewan Agriculture and Food) as a guide to specific data required. Management indicators were chosen and calculated from producer records to compare to theoretical standards and to identify production trends. Finally, the program promoted a team approach to production problem solving based on the producer-veterinarian relationship.

Record keeping remains the most onerous task in a herd management program. Individual animal records are time-consuming and often stymied by loss of animal identification (ear tags). Veterinarians do not have the time nor have they been able to generate income by supervising their clients' record keeping. Producers on the program were required to keep individual animal records but many had previously kept voluminous records without knowing how to apply them to decision-making. The program actually streamlined their records while focusing attention on key production goals. In the main, however, herd records are simpler to keep and so met with much less resistance. Such records can still allow meaningful analysis. Eventually, producers will have to respond to a particular problem by identifying their poorest cows and at that point, the incentive to keep individual animal records will develop. Local veterinarians can then be better utilized to interpret record analysis in the light of a given management situation.

The program also showed that demonstrating a production advantage for a specific management decision does not guarantee its adoption by the producer. The beef herd is often secondary to other farm enterprises and is allotted less management time. Further, decisions are sometimes based on emotion or concerns other than production.

Nonetheless, many producers on the Beef Upgrading Management Program felt it had been worthwhile. It have them the incentive to identify cows by tagging, weigh calves at weaning, change breeding programs and so on. They feel they are making better decisions than before. Some of their veterinarians commented these producers are improving their management at an accelerated pace.

The Beef Upgrading Management Program laid the groundwork for a much larger program, the Beef Production Management Program. It encountered many frustrations, but its purpose was to discover the pitfalls of a beef herd management program and set the stage for a much more ambitious program. In this way, its impact on Saskatchewan agriculture could be substantial.

Even so, given the size of the program (thirty producers), the immediate impact on Saskatchewan agriculture must be small unless those responsible for improving efficiency in the commercial beef industry respond appropriately to these self-motivated producers. These good producers and their veterinarians are casting around for detailed record-keeping and analysis systems. Many already have a good idea of herd performance without the benefit of any formal program, but need help identifying trends within their herds in order to improve them. They need rapid, detailed analysis at least twice yearly, during post-calving and post-weaning, in order to make good decisions. Efforts should be directed at keeping these producers involved because their results will set regional standards and should prove to be the best advertising for a beef production management program.

Background Information

Beef cattle production in Saskatchewan appears to have had a secondary role to crop production. Crop production per acre has doubled in the last 25 years. total production of beef per cow has not increased as dramatically. Potential increases are great if thee are improvements in herd fertility. this can be affected by pregnancy testing and semen testing. Vaccination programs to prevent diseases like Vibriosis and to prevent abortions by diseases like IBR can increase the calf crop dramatically on a province-wide basis. The overall average weight of calves weaned can be increased dramatically by proper genetic selection, pregnancy testing to eliminate late calves, and use of growth promotants. Nutritional counselling is of utmost importance to cut costs to a cost effective ratio. Weighing programs are a necessity to set and maintain a data base to measure program performance. Vaccination programs can do much to reduce loss of life and weight gains through disease.

In the swine industry, a few people are attempting to provide a total management package. The beef industry requires that everyone be involved in management.

Action Plan

1. A beef steering committee was organized by Peter Rempel and Al Hingston. It included a veterinarian from the Western College of Veterinary Medicine, Dr. Eugene Janzen; a private veterinary practitioner appointed by the Saskatchewan Veterinary Medical Association, Dr. Chris Belan; one agrologist from Saskatchewan Rural Development, Extension Branch, Mr. Bob Sparling; two beef producers, Mr. Tim Oleksyn and Mr. Garth Charlton; and the veterinary manager, Dr. Karen Wagner.

   The objectives of the committee were:

   a) To define a total beef management procedure manual by September 1, 1986.

   b) To select 40 producers and veterinarians in a variety of areas in the province who were willing to co-operate in a pilot project by October 1, 1986.

   c) To select a veterinarian to co-ordinate the program, organize the data into meaningful material and to provide extension and trouble shooting expertise by October 1, 1986.

   d) To select a record keeping system to include all aspects of the management project by November 1, 1986. The system would have to be designed so it could be adapted to computer organization.

   e) To establish a media link to make information available so it could be adapted in total or in part to any beef herd by January 1, 1987.

2. Organizational meetings were to be held with producers and veterinarians to discuss guidelines for starting the program by November 1, 1986.

3. Data presentation and report of one year's operation were to be prepared by January 1, 1988.

4. Evaluation of program and readjustment of guidelines were to be prepared by February 1, 1988.

5. Project completion was set for January 1, 1989.

BEEF UPGRADING MANAGEMENT PROGRAM

VETERINARIANS AND PRODUCERS

	Veterinarian	Producer
1.	Dr. T. Mitchell Lakeland Veterinary Services Box 1334 NORTH BATTLEFORD, Sask. S9A 3L8	Brian Sparrow 1702 - 100 Street NORTH BATTLEFORD, Sask. S9A 0W8 446-2217
2.	Dr. D. Pratt Nipawin Veterinary Clinic Box 1450 NIPAWIN, Sask. S0E 1E0	George Lidster WHITE FOX, Sask. S0J 2B0
3.	Dr. Struthers Deep South Animal Clinic Box 187 OGEMA, Sask. S0C 1Y0	-- Wayne Hingtgen OGEMA, Sask. S0C 1Y0 459-2616 - Ted Hartley Box 297 OGEMA, Sask. S0C 1Y0 459-2634
4.	Dr. C. I. Kirk Pierceland Goodsoil Veterinary Services Box 67 PIERCELAND, Sask. S0M 2K0	Gilbert Stremick Box 196 GOODSOIL, Sask. S0M 1A0
5.	Dr. J. Wolfe Borderland Veterinary Dist. Box 130 ROCKGLEN, Sask. S0H 3R0	Calvin Kirby ROCKGLEN, Sask. S0H 3R0
6.	Dr. J. Bone Spiritwood Veterinary Clinic Box 297 SPIRITWOOD, Sask. S0J 2M0	Doug Johnson Box 28 SHELL LAKE, Sask. S0J 2G0
7.	Dr. Clemence Langenburg Veterinary Clinic Box 357 LANGENBURG, Sask. S0A 2A0	Garry Nerbas LANGENBURG, Sask. S0A 2A0 743-2836

Veterinarian	Producer
8. Dr. S. Griffin Carnduff Veterinary Clinic Box 308 CARNDUFF, Sask. S0C 0S0	Tom Arnold Box 113 GLEN EWEN, Sask. S0C 1C0
9. Dr. K. Cadieux Shaunavon Animal Clinic Ltd. Box 369 SHAUNAVON, Sask. S0N 2M0	Amon Ranchers Box 397 SHAUNAVON, Sask. S0N 2M0 297-3241
10. Dr. G. Royan Sherwood Animal Clinic Box 3330 REGINA, Sask. S4P 3A1	Colven Bros. Box 128 BETHUNE, Sask. S0G 0H0
11. Dr. M. Hoffer Maple Creek Animal Services Box 1119 MAPLE CREEK, Sask. S0N 1N0	John Stewart MAPLE CREEK, Sask. S0N 1N0 662-3672
12. Dr. M. Robinson Parkland Veterinary Clinic Box 235 CANORA, Sask. S0A 0L0	- Walter Skibinsky Box 480 CANORA, Sask. S0A 0L0 563-6730 - Alphonse Trach MIKADO, Sask. S0A 2R0
13. Dr. M. Jelinski South East Veterinary Service Box 1380 MOOSOMIN, Sask. S0G 3N0	Turpie Farm MOOSOMIN, Sask. S0G 3N0 435-4114
14. Dr. D. Nitschelm Davidson Veterinary Clinic Box 607 DAVIDSON, Sask. S0G 1A0	L. & R. Barlow Box 516 DAVIDSON, Sask. S0G 1A0 567-4325
15. Dr. R. Evenson Tisdale Animal Clinic Ltd. Box 1059 TISDALE, Sask. S0E 1T0	Smelt Bros. Box 98 AYLSHAM, Sask. S0E 0C0 862-9295

Veterinarian	Producer
16. Dr. A. J. Raymond Poplar Valley Animal Clinic Box 190 ANEROID, Sask. S0N 0C0	Raymond Cyrenne Box 417 PONTEIX, Sask. S0N 1Z0 625-3747
17. Dr. D. Cochrane Melville Veterinary Clinic Box 2048 MELVILLE, Sask. S0A 2P0	Lorne Herndier Box 351 NEUDORF, Sask. S0A 2T0 748-2603
18. Dr. F. J. Weeke's Unity Veterinary Clinic Box 1015 UNITY, Sask. S0K 4L0	Fred Van de Meutter Box 641 UNITY, Sask. S0K 4L0 228-3284
19. Dr. D. T. Mann Swift Current Animal Clinic Box 323 SWIFT CURRENT, Sask. S9H 3V8	George Lowe Box 395 KYLE, Sask. S0L 1T0 375-2843
20. Dr. R. Krauss Preeceville Veterinary Clinic Box 678 PREECEVILLE, Sask. S0A 3B0	Gordon Ake Box 100 LINTLAW, Sask. S0A 2H0
21. Dr. B. K. Schneider Outlook Animal Clinic Box 655 OUTLOOK, Sask. S0L 2N0	K. & G. Farms (G. Follick) OUTLOOK, Sask. S0L 2N0 867-8496
22. Dr. D. Wilson Assiniboia Veterinary Clinic Box 87 ASSINIBOIA, Sask. S0H 0B0	Bruce Richards Box 1568 ASSINIBOIA, Sask. S0H 0B0 642-5806
23. Dr. W. S. Walker Shellbrook Veterinary Services Box 1120 SHELLBROOK, Sask. S0J 2E0	Rod Verbonac Box 161 LEASK, Sask. S0J 1M0 226-4627

Veterinarian	Producer
24. Dr. R. R. Newell Carlyle Veterinary Clinic Box 666 CARLYLE, Sask. S0C 0R0	Robert Johnstone Box 940 CARLYLE, Sask. S0C 0R0 453-6225
25. Dr. B. Laing Leader Veterinary Clinic Box 27 LEADER, Sask. S0N 1H0	Jerry Watts EATONIA, Sask. S0L 0Y0
26. Dr. Hall Neilburg Veterinary Clinic Box 339 NEILBURG, Sask. S0M 2C0	Mel McCrea BALDWINTON, Sask. S0M 0B0 398-2912
27. Dr. Hoium Hoium Veterinary Services Box 626 WEYBURN, Sask. S4H 2K7	Russ Leguee Box 623 WEYBURN, Sask. S4H 2K7 842-6284

Veterinary Co-ordinator

The project was hindered by the lack of a co-ordinator in the original development and implementation. As a result, the committee began the project. Attempts wee made to utilize expertise at W.C.V.M. and contract a veterinarian through the college. An agreement could not be reached.

Dr. Karen Wagner was contracted to administer the project on a part time basis. This proved to be extremely successful. She spent many hours with producers and veterinarians and a great deal of time on data collection, analysis and advice on presentation of records. Information and guidelines were produced to assist the veterinarians in the provision of professional counselling to clients. Without her input, the program would have been a failure.

Jack Gamble from the Livestock Branch, Saskatchewan Department of Agriculture and Food also assisted producers with individual animal records and ROP data. He did an excellent job on a one on one basis.

We gratefully acknowledge the invaluable insights gained from those who have ventured before us into beef cattle herd management programs and from whose work we have drawn heavily. Specifically, we wish to thank Dr. John Basarab, Alberta Agriculture and Drs. Radostits and Blood for their book Herd Health.

The performance targets and troubleshooting suggestions are meant to be theoretical though attainable guidelines only, intended to give focus to solving individual herd problems.

Undoubtedly, local management practices and environmental conditions will change some of these targets. Further, the targets of performance are not carved in stone; they should become more rigorous with time as herd management practices improve. Eventually, too, we hope local data banks will develop to assist in solving local problems.

Score 1: The individual short ribs are fairly sharp to the touch and there is no fat around the tail head. The hip bones, tail head and ribs are visually prominent.

Score 2: The short ribs can be identified individually when touched, but feel rounded rather than sharp. There is some tissue cover around the tail head, over the hip bones and the flank. Individual ribs are no longer visually obvious.

Score 3: The short ribs can only be felt with firm pressure. The areas on either side of the tail head now have a degree of fat cover which can be easily felt.

Score 4: Fat cover around the tail head is evident as slight "rounds", soft to the touch. The short ribs cannot be felt even with firm pressure and folds of fat are beginning to develop over the ribs and thighs of the animal.

Score 5: The bone structure is no longer noticeable and the animal presents a "blocky" appearance. The tail head and hip bones are almost completely buried in fat and folds of fat are apparent over the ribs and thighs. The short ribs are completely covered by fat and the animal's mobility is impaired by the large amounts of fat carried.

In practice, intermediate numbers (halves) can be used for animals whose condition score falls between the above values. For example, a 2.5 score indicates the animal is intermediate between a 2 and a 3 for body condition. Figure 2 shows typical fat cover over the short ribs in cows in various body condition scores. It is important to remember that condition score cannot be measured visually, as a full hair coat can hide a very poor condition. Condition score must be measured by *feeling* for fat cover.

3. When to Condition Score

Cows should be condition scored three times per production year:

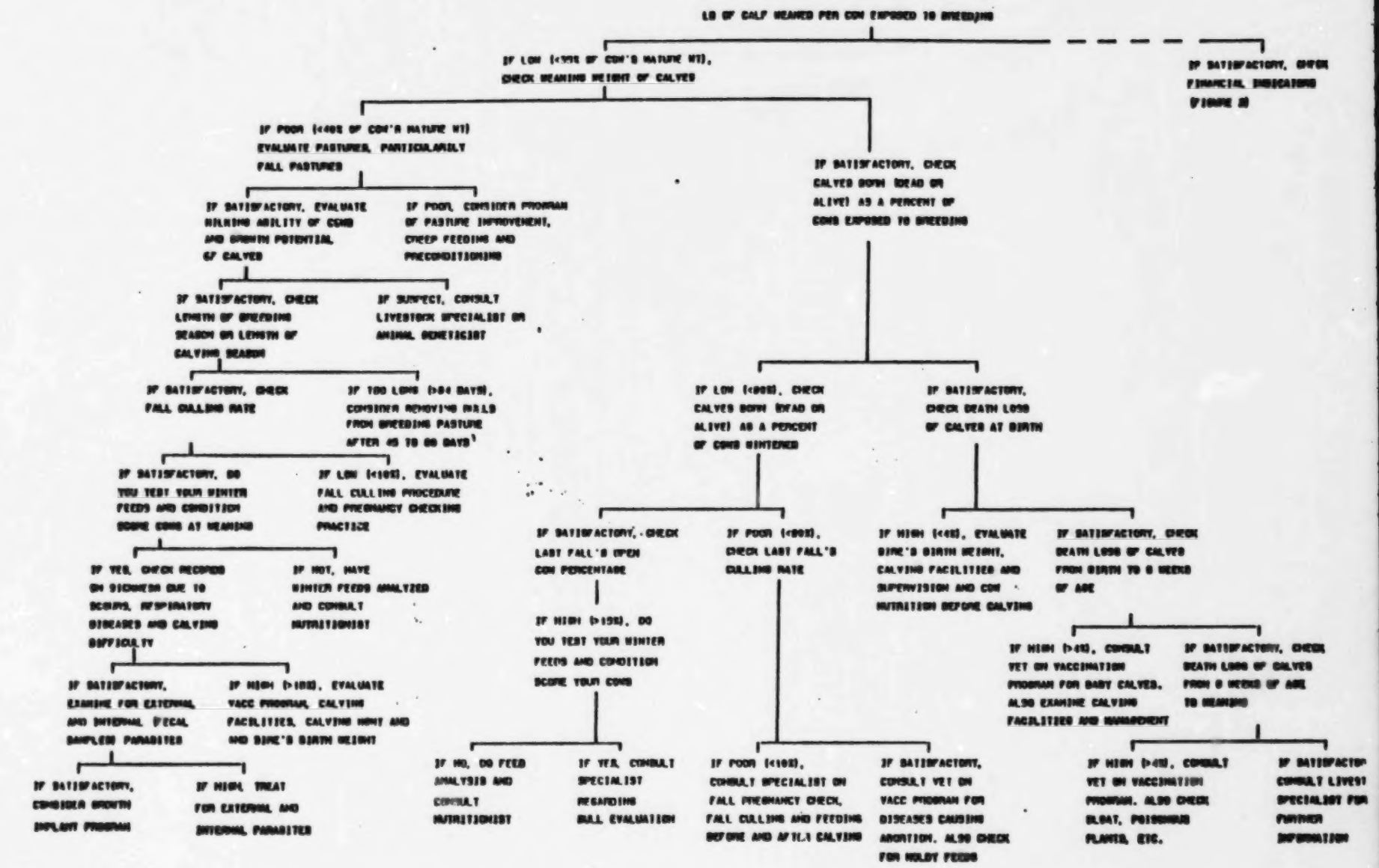
1. Fall pregnancy check/start of winter feeding program. Optimum score is 3.0.
2. At calving. Optimum score for mature cows is 2.5; optimum score for first-calf heifers is 3.0.
3. 30 days before the start of the breeding season. Optimum score is 2.5.

Relationship Between Condition Score And Post-Calving Fertility

Numerous studies have shown that adequate nutrition before and after calving is essential for optimum reproductive performance. Feeding programs which result in thin cows at calving and/or in a loss of body condition after calving increase the interval from calving to estrus (standing heat), and decreased first service conception rates. Both an increase in days to estrus and a decrease in conception rate will result in a decrease in the number of cows becoming pregnant in the first three weeks of the breeding season.

In one study (table 1), cows calving in body condition scores ranging from 2.0 to 3.5 were fed to either gain (high diet) or lose (low diet) 1.0 to 1.5 pounds per day from calving through the breeding season. Cows in the moderate group were fed to maintain body condition after calving. Cows in the low + flushing group were fed the low diet until 2 weeks before the start of the breeding season. They were then fed a "flushing" ration of 8.8 to 13.2 pounds of ground corn per day and corn silage free choice. Flushing was continued throughout the first 30 days of breeding. The information presented in table 1 shows that cows which had a score of 2.0 or less took longer to return to normal estrus than did cows that scored 2.5 or greater. Cows which scored 2.0 or less at calving had a lower pregnancy rate in the first part of the breeding season regardless of the feeding program after calving. In addition, this study also indicated that post-calving feeding programs did not appear to affect potential fertility in cows scoring 2.5 or better at calving. Flushing cows just before and during the breeding season appeared to increase the number of thin cows (scoring 2.0 or less at calving) becoming pregnant in the first 3 weeks of the breeding season.

FIGURE 1. PROCEDURE FOR DIAGNOSING COW/CALF PRODUCTION PROBLEMS


LB OF CALF WEANED PER COW EXPOSED TO BREEDING
IF LOW (<90% OF COW'S MATURE WT), CHECK WEANING WEIGHT OF CALVES
IF SATISFACTORY, CHECK FINANCIAL INDICATORS (FIGURE 2)
IF POOR (<40% OF COW'S MATURE WT) EVALUATE PASTURES, PARTICULARLY FALL PASTURES
IF SATISFACTORY, CHECK CALVES BORN (DEAD OR ALIVE) AS A PERCENT OF COWS EXPOSED TO BREEDING
IF SATISFACTORY, EVALUATE MILKING ABILITY OF COWS AND GROWTH POTENTIAL OF CALVES
IF POOR, CONSIDER PROGRAM OF PASTURE IMPROVEMENT, CREEP FEEDING AND PRECONDITIONING
IF SATISFACTORY, CHECK LENGTH OF BREEDING SEASON OR LENGTH OF CALVING SEASON
IF SUSPECT, CONSULT LIVESTOCK SPECIALIST OR ANIMAL GENETICIST
IF SATISFACTORY, CHECK FALL CULLING RATE
IF TOO LONG (>84 DAYS), CONSIDER REMOVING MALE FROM BREEDING PASTURE AFTER 45 TO 60 DAYS[1]
IF SATISFACTORY, DO YOU TEST YOUR WINTER FEEDS AND CONDITION SCORE COWS AT WEANING
IF LOW (<10%), EVALUATE FALL CULLING PROCEDURE AND PREGNANCY CHECKING PRACTICE
IF YES, CHECK RECORDS ON SICKNESS DUE TO SCOURS, RESPIRATORY DISEASES AND CALVING DIFFICULTY
IF NOT, HAVE WINTER FEEDS ANALYZED AND CONSULT NUTRITIONIST
IF SATISFACTORY, EXAMINE FOR EXTERNAL AND INTERNAL FECAL SAMPLES PARASITES
IF HIGH (>10%), EVALUATE VACC PROGRAM, CALVING FACILITIES, CALVING HOWT AND AND BIRD'S BIRTH WEIGHT
IF SATISFACTORY, CONSIDER GROWTH IMPLANT PROGRAM
IF HIGH, TREAT FOR EXTERNAL AND INTERNAL PARASITES
IF LOW (<90%), CHECK CALVES BORN (DEAD OR ALIVE) AS A PERCENT OF COWS WINTERED
IF SATISFACTORY, CHECK DEATH LOSS OF CALVES AT BIRTH
IF SATISFACTORY, CHECK LAST FALL'S OPEN COW PERCENTAGE
IF POOR (<80%), CHECK LAST FALL'S CULLING RATE
IF HIGH (>15%), DO YOU TEST YOUR WINTER FEEDS AND CONDITION SCORE YOUR COWS
IF HIGH (<4%), EVALUATE DAM'S BIRTH WEIGHT, CALVING FACILITIES AND SUPERVISION AND COW NUTRITION BEFORE CALVING
IF SATISFACTORY, CHECK DEATH LOSS OF CALVES FROM BIRTH TO 8 WEEKS OF AGE
IF HIGH (>4%), CONSULT VET ON VACCINATION PROGRAM FOR BABY CALVES. ALSO EXAMINE CALVING FACILITIES AND MANAGEMENT
IF SATISFACTORY, CHECK DEATH LOSS OF CALVES FROM 8 WEEKS OF AGE TO WEANING
IF NO, DO FEED ANALYSIS AND CONSULT NUTRITIONIST
IF YES, CONSULT SPECIALIST REGARDING BULL EVALUATION
IF POOR (<10%), CONSULT SPECIALIST ON FALL PREGNANCY CHECK, FALL CULLING AND FEEDING BEFORE AND AFTER CALVING
IF SATISFACTORY, CONSULT VET ON VACC PROGRAM FOR DISEASES CAUSING ABORTION. ALSO CHECK FOR MOLDY FEEDS
IF HIGH (>4%), CONSULT VET ON VACCINATION PROGRAM. ALSO CHECK BLOAT, POISONOUS PLANTS, ETC.
IF SATISFACTORY, CONSULT LIVESTOCK SPECIALIST FOR FURTHER INFORMATION

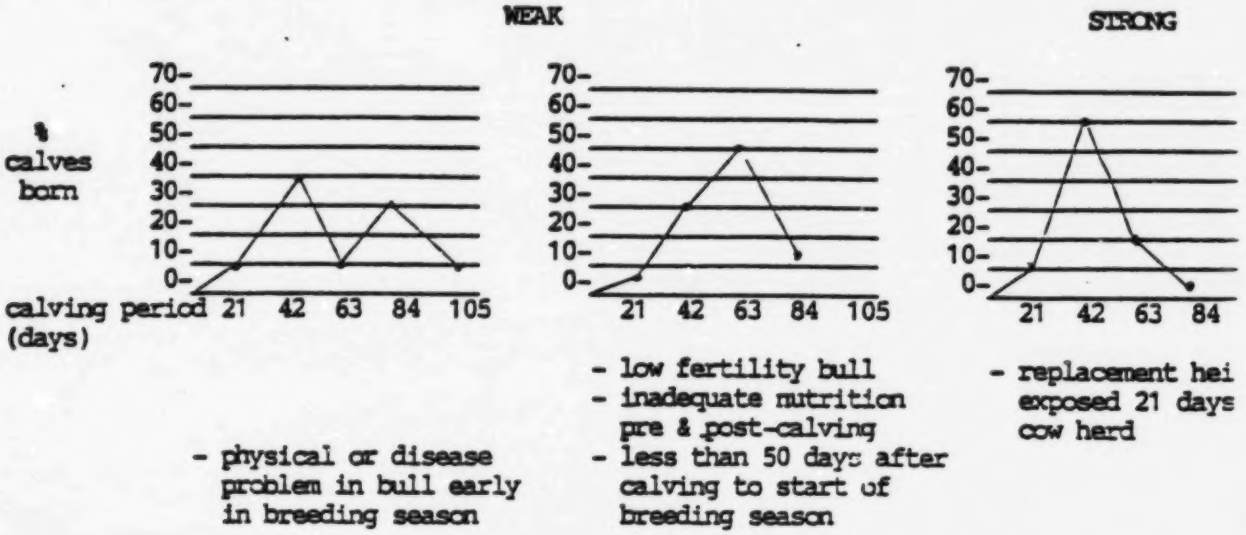
TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
I. PRODUCTION INDICATORS			
A. Calving			
COWS IN POOR CONDITION			- Inadequate nutrition during last trimester - Heavy external/internal parasite lo - Cold winter
COWS TOO FAT			- Receiving too much feed (energy) - Mild winter
TOO FEW CALVES BORN EARLY (1ST 21 DAYS) IN THE CALVING SEASON			
first calvers	less than 50%	more than 75%	- Heifers not sexually mature at star of breeding season - Heifers too small at weaning - Heifers fed inadequate level of nutrition from weaning to breeding - Poor body condition - Infertile or low fertility bull - Reproductive diseases such as IBR, vibriosis, BVD and brucellosis
second calvers	less than 65%	more than 80%	- Inadequate nutrition from weaning to breeding (poor body condition) - As yearlings, were not bred 21 days before main cow herd - Cows less than 50 days after calving at start of breeding season - Open cows and late calvers not culle - Infertile or low fertility bull - High incidence of difficult births with first calf - Reproductive disease such as IBR, vibriosis, BVD and brucellosis

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
mature cows	less than 65%	more than 80%	- Inadequate nutrition before and after calving; poor body condition - Cows less than 50 days after calvi at start of breeding season - Open cows and late calvers not cul - Infertile or low fertility bulls - Reproductive diseases such as IBR, vibriosis, BVD and brucellosis
CALVING SEASON TOO LONG	more than 84 d	less than 63 d	- Extended breeding season (60 days) - Not pregnancy checking in the fall - Not culling open cows and late calvers - Reproductive disease, e.g. IBR, vibriosis - Inadequate level of nutrition befc and after calving - Infertile or low fertility bull - Poor body condition of cows

ABNORMAL CALVING DISTRIBUTION - Replacement heifers exposed to bull 21 days before mai
cow herd

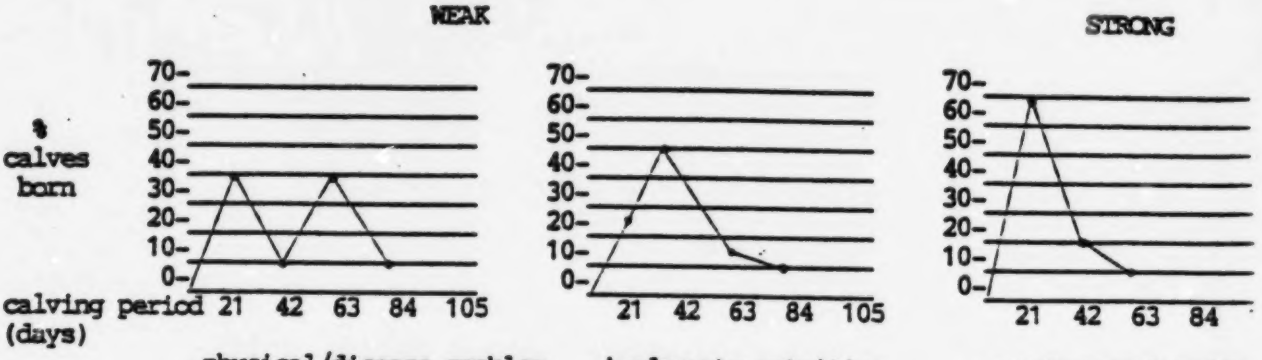


Ideally, in a herd where heifers are exposed 21 days before the cow herd, the expected calving distribution graphs as a bell-shaped curve. The "% calves born" in each three week period includes calves born from cows and heifers both.

A physical or disease problem in the bull early in breeding season results in a calving distribution with two peaks, when cows missed in estrus early in the breeding season a later settled by a recovering bull.

When the females are not coming into estrus soon enough due to,e.g. poor nutrition, th calving distribution curve is correspondingly lengthened and flattened.

ABNORMAL CALVING DISTRIBUTION - Replacement heifers exposed to bull at same time as cow herd



-physical/disease problem in bull early in breeding season

-inadequate nutrition pre and post-calving
-less than 50 d after calving at start of breeding season
-low fertility bull

-replacement heife exposed at same ti as cow herd

Ideally, in a herd where heifers are exposed to bulls at the same time as the cow herd, the expected calving distribution graphs as a very sharp bell-shaped curve. The "% cal born" in each three week period includes calves born from cows and heifers both.

A physical or disease problem in the bull early in breeding season results in a graph w two peaks when cows not bred early in the breeding are settled later by the recovered bull.

When females start breeding season reproductively "unfit" due to inadequate nutrition o are less than 50 days after calving at the start of breeding season, the calving distribution graph is lengthened and flattened.

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
HIGH INCIDENCE OF CALVING DIFFICULTY			
heifers (first calvers)	more than 5%	less than 2%	- Birth weight of sire too high - Not developed enough before breeding - Not fed adequately from weaning to breeding - Not fed adequately after breeding
second calvers and mature cows	more than 4%	less than 2%	- Birth weight of sire too high - Inadequate nutrition before calvi - Insufficient pre-calving manageme - Poor culling procedure
ABNORMALITIES AT BIRTH			
	more than 2%	none	- Breeding program; e.g., inbreedin - Sire and dam of affected offsprin are carriers of abnormality - Environmental factors
CALF SICKNESS RATE			
0 - 14 days of age	more than 2%		- Scours - High incidence of dystochia
15 - 60 days of age	more than 2%		- Inadequate cow nutrition before an after calving - Did not receive colostrum within 6 hours of birth. - Inadequate vaccination program - Insufficient supervision at calvin and/or inadequate facilities
61 days to weaning	more than 2%		- Clostridial diseases - Bloat, footrot, abomasal ulcers - Inadequate vaccination program

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
HIGH DEATH LOSS OF CALVES			
at birth	more than 4%	less than 2%	- Insufficient supervision at calvin - Inadequate nutrition of cows durin last trimester - Birth weight of sire too high - Weather and calving facilities - Congenital abnormalities
from birth to six weeks of age	more than 4%	less than 2%	- Scours - High incidence of calving difficul - Inadequate cow nutrition before an after calving - Inadequate vaccination program - Insufficient supervision and management at calving; did not receive colostrum within six hours of birth
B. Breeding			
COWS IN POOR CONDITION			- Inadequate nutrition during last trimester and after calving - Heavy external/internal parasite lo
COWS TOO FAT			- Receiving too much feed (energy)
DO NOT SHOW ESTRUS % in heat in first 21 days of the breeding season			
heifers (first calvers)	less than 75%	more than 95%	- Heifers not sexually mature - Inadequate plane of nutrition - Too light at weaning;heifer should be 60-66% of mature weight at breeding

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
second calvers and mature cows	less than 75%	more than 95%	- Inadequate plane of nutrition du last trimester of pregnancy and after calving - Less than 50 days after calving - Disease or injury at calving
DO NOT SETTLE % returning to heat			
heifers (first calvers)	more than 35%	less than 15%	- Insufficient bull power; immatur bull - Infertile bull - Injured bull - Reproductive disease such as IBR vibriosis, BVD and brucellosis - Poor A.I. technique
second calvers and mature cows	more than 35%	less than 15%	- Insufficient bull power - Uterine infection - Reproductive diseases such as IB vibriosis, BVD and brucellosis - Infertility or low fertility of - Physical problem in bull
HIGH DEATH LOSS OF CALVES			
from 6 weeks of age to weaning	more than 4%	less than 2%	- Diseases such as blackleg, BVD, a pneumonia - Bloat - Inadequate vaccination program - Accidental death and predation - Poor mothering dam - Poisonous plants - Poor pasture, e.g. drought

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
POOR CALF CROP OF COWS WINTERED			
calves weaned per cow wintered	less than 90%	more than 95%	- Not pregnancy checking in the fall - Not culling open cows and late calvers - Reproductive diseases such as IBR, fungal abortion, leptospirosis, vibriosis and brucellosis - High death loss due to calving difficulty, poor nutrition, respiratory diseases, scours, calving management and calving facilities - Vaccination program - Poor pasture conditions (drought, poisonous plants)
TOO MANY OPEN COWS			
	more than 15%	less than 5%	- Inadequate level of cow nutrition before and after calving; check energy and phosphorus - Infertile or low fertility bull - Diseases causing early embryonic death, e.g., vibriosis, IBR - Inadequate vaccination program - Poor culling - Long breeding season
POOR CALF CROP WEANED OF CALVES BORN ALIVE			
calves weaned of calves born alive	less than 90%	more than 98%	- Scours - High incidence of calving difficulty - Inadequate cow nutrition before and after calving - Pneumonia and starvation - Inadequate calving management - Did not receive adequate colostrum within first 6 hours of birth

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS WEAK	BENCHMARKS STRONG	POSSIBLE CAUSES OF WEAKNESS
C. Weaning			
COWS IN POOR CONDITION			- Poor pastures, particularly in the fall - Stocking rate does not match gra system and forage resources - Drought - Heavy external and/or internal parasite load - Marketing strategy does not matc available feed resources
COWS TOO FAT			- Receiving too much feed (energy)
POOR CALF CROP OF COWS EXPOSED calves weaned per cows exposed	less than 80%	more than 95%	- Long breeding season in previous years, increasing rates of late calvers and open cows - Non-cycling cows due to nutritior problem, e.g., deficiency of ener phosphorus - Poor condition scores - Inadequate winter feeding progran - Inadequate bull power - Venereal diseases such as vibrios IBR, and brucellosis increase ear embryonic death - Poor culling - High death loss due to calving difficulty (check sire's birth weight), poor nutrition, disease calving management and calving facilities - Vaccination program, for cows and calves

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS WEAK	BENCHMARKS STRONG	POSSIBLE CAUSES OF WEAKNESS
AVERAGE WEANING WEIGHT AS A PERCENTAGE OF COW MATURE WEIGHT	less than 40%	more than 50%	- Wide age variation due to extend calving season - Drought - Choice of breed(s) and breeding program - Scours and respiratory diseases - External/internal parasites - Poor milking dams - No selective culling of breeding - Non-use of growth stimulants - Creep feeding - Wrong calving season in relation feed sources
POOR OVERALL PRODUCTION lb. of calf weaned per cow exposed For annual comparison of production efficiency within a herd. Comparisons between herds and a rigid performance target would not be useful due to differences in genetic makeup, management practices and local conditions.			- Check all management indicators weaknesses
D. Weaning to Calving			
HIGH ABORTION RATE in heifers and cows	more than 1%	less than 0.5%	- Reproductive diseases such as IB BVD, fungal abortion, leptospiro

TROUBLESHOOTING GUIDE

KEY MANAGEMENT INDICATORS	BENCHMARKS		POSSIBLE CAUSES OF WEAKNESS
	WEAK	STRONG	
FALL PREDICTED LATE CALVER RATE	more than 5%		- Extended breeding season - Not culling open cows and late calvers - Inadequate level of cow nutrition before and after calving - check energy level of ration - Cows in poor body condition at calving and/or start of breeding - Reproductive disease (vibriosis) - Inadequate pasture and parasite control
FALL PREGNANCY RATE (42-60 day breeding season)			
Yearling heifers		95%	- Inadequate level of nutrition from from weaning to breeding - Too small at weaning - Infertile or low fertility bulls - Reproductive disease in herd, e.g., vibriosis
Mixed age cows		100%	- Inadequate level of cow nutrition before and after calving - Cows less than 50 days after calving at start of breeding season - Poor body condition score at time of calving and/or beginning of breeding season - Infertile or low fertility bulls - Reproductive disease in cow herd
AVERAGE AGE OF CALVES AT WEANING			
	less than 210 - 240 days		- Calving season too long - Breeding season wrong relative to quality of pasture/feed source

SPRING INFORMATION SHEET
HERD RECORD SHEET 19__ IDENTIFICATION #_____

A.LENGTH OF CALVING

	FIRST CALF HEIFERS	MATURE COWS	OPTIONAL 2ND CALF COWS
BIRTH DATE OF FIRST CALF	_____	_____	_____
# of calves born first 21 days	_____	_____	_____
# of calves born second 21 days	_____	_____	_____
# of calves born third 21 days	_____	_____	_____
# of calves born fourth 21 days	_____	_____	_____
# of calves born fifth 21 days	_____	_____	_____
# of calves born after 15 weeks	_____	_____	_____
BIRTH DATE OF LAST CALF BORN	_____	_____	_____

B.DISEASE AND DEATH LOSS IN SPRING

# of calves born alive	_____	_____	_____
# of calves born dead	_____	_____	_____
# of difficult births:			
pulls	_____	_____	_____
abnormal presentations	_____	_____	_____
caesarean delivery	_____	_____	_____
# of calves that died from:			
birth - 48 hrs	_____	_____	_____
3rd-14th day	_____	_____	_____
15th - 60th day	_____	_____	_____
61 day to date of weaning	_____	_____	_____

# of calves treated for various diseases after birth

	# Treated	# Died
calving difficulty	____	____
scours	____	____
pneumonia	____	____
accident	____	____
other	____	____

explain other diseases:_____
_____

Treatment Program(Spring)
Calves- Implant_____,Clostridia_____,Fly tagged_____,Dehorned____,
Castrated____,Branded_____AD&E_____,Other(What?)_____
_____

For information on the spring indicators and how they are calculated please turn page over.

C. SPRING INDICATORS

a.Lenght of calving season =# of days from 1st to last birth=___

b.Assisted births: $= \frac{\text{\#assisted births}}{\text{\# of cows calving}} \times 100$ =____%

c.Calf crop(first 42days): $= \frac{\text{\# of calves born first 42 days}}{\text{\# of cows wintered}} \times 100$ =____%

d.Abortion rate $= 100 - \left(\frac{\text{\# of cows calving in the spring}}{\text{\# of pregnant cows wintered}}\right) \times 100$ =____%

e.Calf sickness rate $= \frac{\text{\# of calves treated}}{\text{\# of calves born alive}} \times 100$ =____%

f.Calf death loss:

i)Death loss at birth $= \frac{\text{\# of calves born dead}}{\text{total \# of calves born}} \times 100$ =____%

ii) Death loss 0-48 hrs $= \frac{\text{\# of calves died 0-48 hrs}}{\text{\# calves born alive}} \times 100$=____%

iii)Death loss 3-14 days $= \frac{\text{\# of calves died 3-14 days}}{\text{\# calves born alive}} \times 100$=____%

iv)Death loss 15-60 days $= \frac{\text{\# of calves died 15-60 days}}{\text{\# of calves born alive}} \times 100$=____%

v.)Death loss 61- weaning $= \frac{\text{\# of calves died 61-weaning}}{\text{\# of calves born alive}} \times 100$=____%

FALL INFORMATION SHEET
HERD RECORD SHEET 19__ IDENTIFICATION #_____
A.GROWTH INFORMATION (Actual___ or estimated ___ weights)
Date calves weaned_____

	FIRST CALF HEIFERS	MATURE COWS	OPTIONAL 2ND CALF COWS
# of heifers weaned	_____	____	____
# of bulls/steers weaned	_____	____	____
Average weaning wt. for heifers	_____	____	____
Average weaning wt. for bulls/steers	_____	____	____

Treatment Program(Fall)
Calves-Implant___,Clostridia___,Dehorned___,Castrated___,Branded__
Iteme___,IBR,PI3(BVD)___,Warbles___,Vit A,D &E___,Other_____

B.PREGNANCY TEST:	FIRST CALF HEIFERS	2ND CALF COWS	MATURE COWS
# diagnosed pregnant	____	____	____
# diagnosed open	____	____	____
# diagnosed late	____	____	____

If pregnancy data is not avialable calculate the key indicators on cows wintered and calves born the following spring.
Breeding Program: Beginning date:_____Ending date:_____
# of bulls in breeding program:_____
Do you breed your heifers separately from the main herd?___

C.ADDITIONAL COW DATA:
# of cows culled before winter feeding?____

Reasons for culling	# OF FIRST CALVERS	# OF MATURE COWS
not pregnant or late	____	____
disease problem	____	____
physical problem	____	____
herd reduction	____	____
poor production	____	____

# of cows going into winter ?___
Average weight of cows at weaning?_____lbs(actual__estimated)
Cows weights range from _____to_____lbs
Treatment Program
Cows - Vibrio___,Vicogen___,IBR___,BVD___,Fly tagged___,
Warbles___,Vit A,D & E___,Other_____.

D.NUTRITIONAL INFORMATION
Were feed samples sent in to the Feed Test Lab for analysis?____
Were rations balanced using the data from the Feed Test Lab?_____

E.INFORMATION FROM INDIVIDUAL RECORDS:

I.COW AGE AND PRODUCTION

Cow Age (years)	Number of Cows	Actual Weaning Weight	Adjusted Weaning Weight
2	____	_____	_____
3	____	_____	_____
4	____	_____	_____
5	____	_____	_____
6-10	____	_____	_____
over 10	____	_____	_____

II.COMPARISON OF CALF WEIGHTS ACCORDING TO BIRTH DATE

Calving intervals on 21 day basis	# of calves	Actual Weaning weight	Adjusted Weaning weight
1			
2	____	_____	_____
3	____	_____	_____
4	____	_____	_____
5	____	_____	_____
6+	____	_____	_____

F.CALCULATION OF FALL INDICATORS

a.Fall pregnancy rate

$$100 - \left(\frac{\text{\# of open cows}}{\text{\# of cows exposed to bulls}} \times 100 \right) = \_\_\_\_\_\%$$

b.Fall pregnancy rate for heifers:

$$100 - \left(\frac{\text{\# of open heifers}}{\text{\# of heifers exposed}} \times 100 \right) = \_\_\_\_\_\%$$

c.Late calves rate

$$= \frac{\text{\# of cows to calve after cut off date}}{\text{\# of cows exposed to bulls}} \times 100 = \_\_\_\_\_\%$$

d.Weaning rate

$$= \frac{\text{\# of calves weaned}}{\text{\# of cows wintered}} \times 100 = \_\_\_\_\_\%$$

e. Average weight of calves

$$= \frac{\text{total weight}}{\text{\# of calves weaned}} = \_\_\_\_\_ \text{lb}$$

f.Calf weaning weight to cow wt. ratio

$$= \frac{\text{Average weight of calves}}{\text{Average weight of cows at weaning}} = \_\_\_\_\_\%$$

g.Length of breeding season = # of days cow is exposed to bull=___

GUIDE TO THE BEEF PRODUCTION MANAGEMENT PROJECT

SPRING AND FALL SHEETS

Spring Sheet 1: Data

A. Length of Calving Period

The total number of calves born in each dam age class should equal the combined number of live births plus stillbirths asked for in section B. It should also usually equal the number of dams in that age class at the start of calving season. It would be helpful to identify any twin births or stillbirths in a particular 21 day interval in a margin note.

The accurate recording of this portion of the data is essential in identifying breeding problems and in comparing growth data in a herd from year to year. It permits a calculation of average calf age at weaning so that weaning weights can be standardized to a 200 day adjusted weight (see Growth Data later).

B. Disease and Death Loss in Spring

The reporting of calf death losses should be as complete as possible and include all deaths, whether calves were treated or untreated.

Calves that were treated for various diseases after birth can then be listed separately at the end of section B and mortalities following treatment noted as well.

If overall calf sickness and/or death losses seem excessive, it may be helpful to identify which dam age class is having the greater losses.

Fall Sheet 1: Data

A. Growth Information

Please indicate in a margin note if the weighing date is different from the weaning date or if, e.g., calves from heifers were weaning/weighed at a different date than those from mature cows. If sale weights are being used for part or all of the herd, indicate gross lot weight and number of calves per lot.

B. Additional Cow Data

If possible, an estimate of average cow weight at weaning time for first calf heifers and for mature cows would allow more accurate data analysis.

Fall Sheet 2: Optional Data and Indicators

A. Information from Individual Records (Optional)

AI and AII: Adjusted weaning weights will be calculated by the Saskatchewan Livestock Association when completed data sheets are submitted.

Please note section AI identifies production performance in each dam age class while aII shows the effect of a prolonged calving season on actual weaning weights.

B. Calculation of Fall Indicators

c. Late calves rate: The calculation of this rate follows consultation between producer and veterinarian to arrive at a "cut-off date and is dependent on the results of herd pregnancy testing. A rigidly set maximum rate would not be helpful to many producers at this time so the late calves rate is meant to alert the individual producer to the need for further investigation if the rate increases markedly in a given year.

For your information, Saskatchewan herds reporting to a pregnancy testing survey in 1987 had an average calving season of 83 days. In these reporting herds, any cow calving after, e.g., 90 days from the start of calving season might reasonable be considered "late."

f. Calf weaning weight to cow weight ratio will be calculated through the GOLD computer program after data is submitted. The program will calculate the average age of calves at weaning in each dam age class and adjust to a 200 day weaning weight. The calf weight to cow weight ratio can then be compared within a herd from year to year and by dam age class even though the average age of calves at weaning may vary yearly.

<u>Breeding Data Sheet</u>

C. Pregnancy Data

Number diagnosed late: see earlier explanation under Calculation of Fall Indicators, part c.

A brief reminder of key production goals follows:

Growth, measured by calf weaning weight as a percentage of cow weight.	50%	good
	40%	average, poor
Open Cows, as a percentage of total number of cows exposed to breeding	8%	poor
	5%	good, very good
length of calving season	84 days	poor
	63 days	good, very good
Death losses as a percentage of total number	4%	poor
	2%	good, excellent

DAM I.D.	SIRE I.D.	CALF							COMMENTS e.g. died at birth dam raised 6L twin	FALL PREG CHECK	CULLS Y/N e.g. Y/poor u
		CALVING					WEANING				
		CALF I.D.	DATE	WEIGHT	SEX	EASE	DATE	WEIGHT			

GOLD KEY INDICATORS IN BEEF PRODUCTION

me: sample

	First Calf Heifers	Second Calf Cows	Mature Cows
Growth Indicators			
1. Avg. weaning Wt (200 day adj):	443	420	492
2. Ratio: calf weaning/cow wt:	44	38	38
Pregnancy Rate Indicator			
1. Open Females (%):	10	20	3
2. Late Females (%):	10	10	3
Lenghth of Calving Period			
1. Calving Season (days):	135	87	106
2. Calf Crop (% 1st 42 days):	40	70	40
Calf Death Losses			
1. At Birth:	20	10	4
2. 0 - 48 Hours:	13	0	0
3. 3 - 14 Days:	0	11	4
4. 15 - 60 Days:	0	0	0
5. 61 - Weaning:	0	0	0

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : ALLAN & BERNICE BALL

Veterinarian : PREECEVILLE VETERINARY CLINIC

I. Spring Indicators

```
                                                                    1
                    1    2    3    4    5    6    7    8    9     0
               0    0    0    0    0    0    0    0    0    0     0
               :....:....:....:....:....:....:....:....:....:....:
```

Length : Calving Season
1986 -> 0 days
1987 -> 0 days
1988 -> 74 days

Assisted Births (%)
1986 > (0.0)
1987 > (0.0)
1988 > (8.3) OOOO

Calf Crop in 1st 42 day
1986 > (0.0)
1987 > (0.0)
1988 > (94.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO

Abortion Rate (%)
1986 > (0.0)
1987 > (0.0)
1988 > (2.0) O

Calf Sickness Rate (%)
1986 > (0.0)
1987 > (0.0)
1988 > (21.3) OOOOOOOOOOO

Death Loss : Birth (%)
1986 > (0.0)
1987 > (0.0)
1988 > (2.0) O

Death : 0-48 hrs (%)
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Death : 3-14 days (%)
1986 > (0.0)
1987 > (0.0)
1988 > (2.0) O

Death : 15-60 days (%)
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Death : 61 days to Wng
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : ALLAN & BERNICE BALL

Veterinarian : PREECEVILLE VETERINARY CLINIC

II. Fall Data : Cow Age and Production

```
                    1    2    3    4    5    6    7    8    9   10
               0    0    0    0    0    0    0    0    0    0    0
               0    0    0    0    0    0    0    0    0    0    0
               :....:....:....:....:....:....:....:....:....:....:
  2yr : Act WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (561.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
  2yr : Adj WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
  3yr : Act WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (616.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
  3yr : Adj WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
  4yr : Act WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (552.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOO
  4yr : Adj WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
  5yr : Act WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (628.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
  5yr : Adj WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
  6-10: Act WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (554.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOO
  6-10: Adj WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
  +10: Act WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
  +10: Adj WW
  1986 > (   0.0)
  1987 > (   0.0)
  1988 > (   0.0)
```

Saskatchewan Agriculture

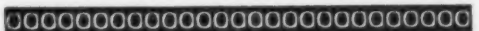
BEEF PRODUCTION MANAGEMENT PROJECT

Producer : ALLAN & BERNICE BALL

Veterinarian : PREECEVILLE VETERINARY CLINIC

II. Fall Data : Comparison of Calf Weights to Birth Dates

```
                                                                  1
                    1   2   3   4   5   6   7   8   9   0
                0   0   0   0   0   0   0   0   0   0   0
                0   0   0   0   0   0   0   0   0   0   0
                :...:...:...:...:...:...:...:...:...:...:
```

1st 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
1st 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
2nd 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (529.0) 
2nd 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
3rd 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (510.0)
3rd 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
4th 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (400.0)
4th 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
5th 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
5th 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
6+ Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
6+ Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : ALLAN & BERNICE BALL

Veterinarian : PREECEVILLE VETERINARY CLINIC

II. Fall Data : Fall Indicators

0 10 20 30 40 50 60 70 80 90 100

Fall Preg RATE
1986 > (0.0)
1987 > (0.0)
1988 > (97.7)

Fall Preg Rate (Heifers
1986 > (0.0)
1987 > (0.0)
1988 > (93.4)

Late Calves Rate
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Weaning Rate
1986 > (0.0)
1987 > (0.0)
1988 > (92.0)

Ave Weaning Wt
1986 > 0.0
1987 > 0.0
1988 > 556.0

Calf to Cow Wt RATIO
1986 > (0.0)
1987 > (0.0)
1988 > (46.0)

Length of Breeding Sea
1986 > 0.0
1987 > 0.0
1988 > 158.0

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : ALLAN & BERNICE BALL

Veterinarian : PREECEVILLE VETERINARY CLINIC

III. Breeding Report

	1986 ****	1987 ****	1988 ****
Bull Battery			
Age of Bull #1			4
Age of Bull #2			2
Age of Bull #3			0
Age of Bull #4			0
Age of Bull #5			0
Was breeding SOUNDNESS Done			No

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : LAWRENCE AMMON

Veterinarian : BUMP PROGRAM

I. Spring Indicators

```
                    1   2   3   4   5   6   7   8   9   1
                0   0   0   0   0   0   0   0   0   0   0
                :...:...:...:...:...:...:...:...:...:...:
```

Length : Calving Season
1986 -> 0 days
1987 -> 134 days
1988 -> 113 days

Assisted Births (%)
1986 > (0.0)
1987 > (6.5) ▯▯▯
1988 > (5.0) ▯▯▯

Calf Crop in 1st 42 day
1986 > (0.0)
1987 > (88.0) ▯▯▯

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : LAWRENCE AMMON

Veterinarian : BUMP PROGRAM

II. Fall Data : Cow Age and Production

	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0

2yr : Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
2yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
3yr : Act WW
1986 > (0.0)
1987 > (627.0)
1988 > (0.0)
3yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
4yr : Act WW
1986 > (0.0)
1987 > (638.0)
1988 > (0.0)
4yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
5yr : Act WW
1986 > (0.0)
1987 > (532.0)
1988 > (0.0)
5yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
6-10: Act WW
1986 > (0.0)
1987 > (532.0)
1988 > (0.0)
6-10: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
6-10: Act WW
1986 > (0.0)
1987 > (532.0)
1988 > (0.0)
6-10: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : LAWRENCE AMMON

Veterinarian : BUMP PROGRAM

II. Fall Data : Comparison of Calf Weights to Birth Dates

```
                                                                  1
                    1   2   3   4   5   6   7   8   9   0
                0   0   0   0   0   0   0   0   0   0   0
                0   0   0   0   0   0   0   0   0   0   0
                :...:...:...:...:...:...:...:...:...:...:
```

1st 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

1st 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

2nd 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

2nd 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

3rd 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

3rd 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

4th 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

4th 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

5th 21 days: Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

5th 21 days: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

6t Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

6t Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)

Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : LAWRENCE AMMON

Veterinarian : BUMP PROGRAM

II. Fall Data : Fall Indicators

```
                                                                    1
                    1   2   3   4   5   6   7   8   9   0
                0   0   0   0   0   0   0   0   0   0   0
                :...:...:...:...:...:...:...:...:...:...:
Fall Preg RATE
  1986 > (  0.0)
  1987 > ( 98.0) ooooooooooooooooooooooooooooooooooooooooooooooooooo
  1988 > (  0.0)
Fall Preg Rate (Heifers
  1986 > (  0.0)
  1987 > ( 93.0) ooooooooooooooooooooooooooooooooooooooooooooooooo
  1988 > (  0.0)
Late Calves Rate
  1986 > (  0.0)
  1987 > (  0.0)
  1988 > (  0.0)
Weaning Rate
  1986 > (  0.0)
  1987 > (100.0) ooooooooooooooooooooooooooooooooooooooooooooooooooo
  1988 > ( 95.0) ooooooooooooooooooooooooooooooooooooooooooooooooo
Ave Weaning Wt
  1986 >    0.0
  1987 >  557.0
  1988 >  563.0
Calf to Cow Wt RATIO
  1986 > (  0.0)
  1987 > (  0.0)
  1988 > (  0.0)
Length of Breeding Sea
  1986 >    0.0
  1987 >   91.0
  1988 >    0.0
```


Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : LAWRENCE AMMON

Veterinarian : BUMP PROGRAM

III. Breeding Report

	1986 ****	1987 ****	1988 ****
Bull Battery			
Age of Bull #1		0	
Age of Bull #2		0	
Age of Bull #3		0	
Age of Bull #4		0	
Age of Bull #5		0	
Was breeding SOUNDNESS Done		No	

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : RAYMOND CYRENNE

Veterinarian : POPLAR VALLEY ANIMAL CLINIC

1. Spring Indicators

```
                                                                    1
                    1   2   3   4   5   6   7   8   9   0
                0   0   0   0   0   0   0   0   0   0   0
                :...:...:...:...:...:...:...:...:...:...:
```

Length : Calving Season
1986 -> 60 days
1987 -> 107 days
1988 -> 110 days

Assisted Births (%)
1986 > (0.0)
1987 > (0.0)
1988 > (5.3) ▒▒▒

Calf Crop in 1st 42 day
1986 > (79.0) ▒▒▒

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BEEF PRODUCTION MANAGEMENT PROJECT

Producer : RAYMOND CYRENNE

Veterinarian : POPLAR VALLEY ANIMAL CLINIC

II. Fall Data : Cow Age and Production

	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0

2yr : Act WW
1986 > (580.0)
1987 > (481.0)
1988 > (472.0)
2yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (494.0)
3yr : Act WW
1986 > (645.0)
1987 > (620.0)
1988 > (537.0)
3yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (520.0)
4yr : Act WW
1986 > (598.0)
1987 > (631.0)
1988 > (600.0)
4yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (506.0)
5yr : Act WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
5yr : Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (0.0)
6-10: Act WW
1986 > (601.0)
1987 > (608.0)
1988 > (569.0)
6-10: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (509.0)
+10: Act WW
1986 > (614.0)
1987 > (569.0)
1988 > (538.0)
+10: Adj WW
1986 > (0.0)
1987 > (0.0)
1988 > (485.0)

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BEEF PRODUCTION MANAGEMENT PROJECT

Producer : RAYMOND CYRENNE

Veterinarian : POPLAR VALLEY ANIMAL CLINIC

II. Fall Data : Comparison of Calf Weights to Birth Dates

```
                                                                    1
                    1    2    3    4    5    6    7    8    9     0
               0    0    0    0    0    0    0    0    0    0     0
               0    0    0    0    0    0    0    0    0    0     0
               :....:....:....:....:....:....:....:....:....:....:
  1st 21 days: Act WW
    1986 > (643.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
    1987 > (633.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
    1988 > (593.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
  1st 21 days: Adj WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (510.0) OOOOOOOOOOOOOOOOOOOOOOOOO
  2nd 21 days: Act WW
    1986 > (594.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
    1987 > (580.0) OOOOOOOOOOOOOOOOOOOOOOOOOOO
    1988 > (587.0) OOOOOOOOOOOOOOOOOOOOOOOOOOOO
  2nd 21 days: Adj WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (511.0) OOOOOOOOOOOOOOOOOOOOOOOOO
  3rd 21 days: Act WW
    1986 > (549.0) OOOOOOOOOOOOOOOOOOOOOOOOOO
    1987 > (499.0) OOOOOOOOOOOOOOOOOOOOOO
    1988 > (541.0) OOOOOOOOOOOOOOOOOOOOOOOOO
  3rd 21 days: Adj WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (497.0) OOOOOOOOOOOOOOOOOOOOOOO
  4th 21 days: Act WW
    1986 > (  0.0)
    1987 > (378.0) OOOOOOOOOOOOOOOOO
    1988 > (473.0) OOOOOOOOOOOOOOOOOOOO
  4th 21 days: Adj WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (496.0) OOOOOOOOOOOOOOOOOOOOOO
  5th 21 days: Act WW
    1986 > (  0.0)
    1987 > (440.0) OOOOOOOOOOOOOOOOOO
    1988 > (  0.0)
  5th 21 days: Adj WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (  0.0)
  6t          : Act WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (435.0) OOOOOOOOOOOOOOOOOO
  6t          : Adj WW
    1986 > (  0.0)
    1987 > (  0.0)
    1988 > (504.0) OOOOOOOOOOOOOOOOOOOOO
```

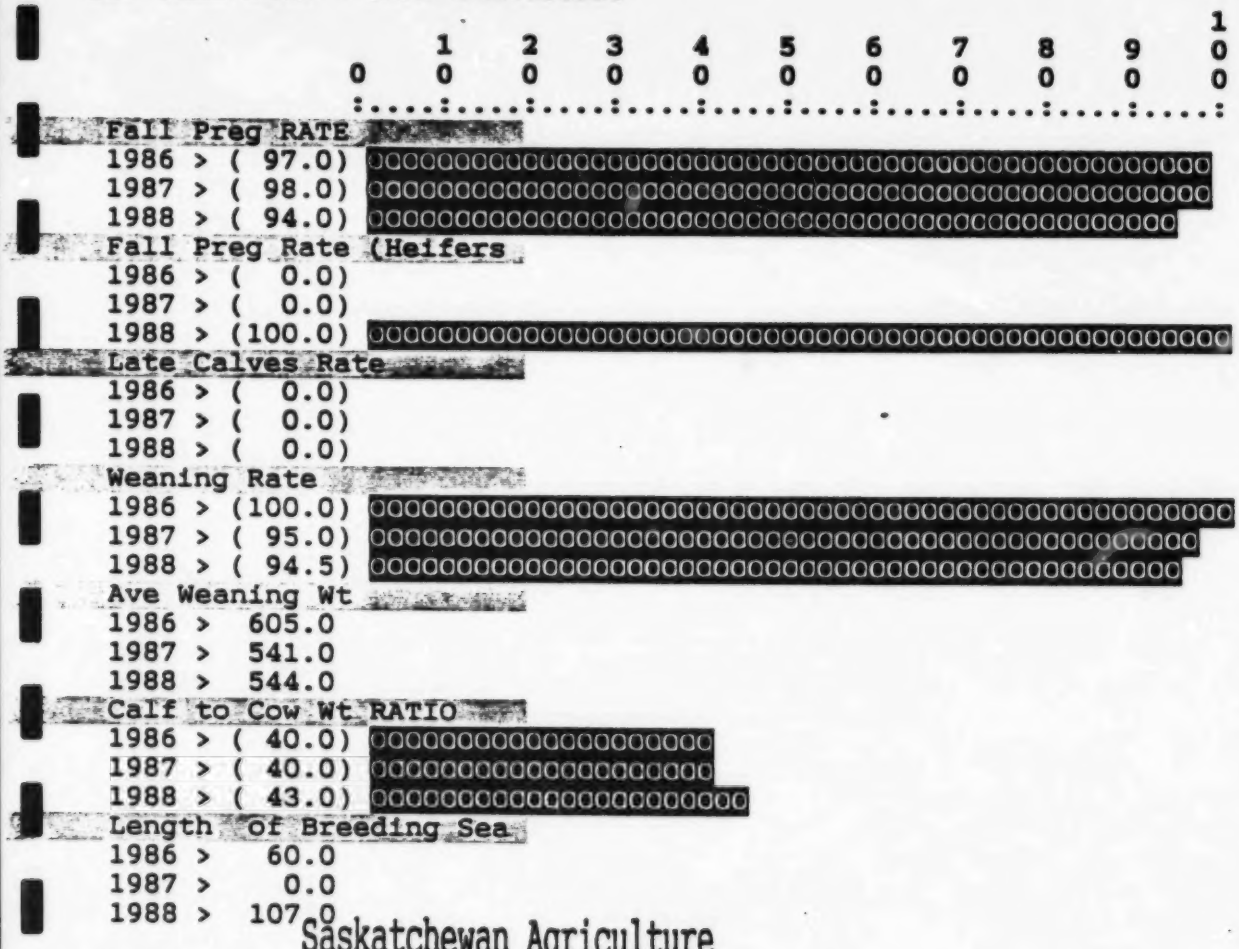
Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : RAYMOND CYRENNE

Veterinarian : POPLAR VALLEY ANIMAL CLINIC

II. Fall Data : Fall Indicators



Saskatchewan Agriculture

BEEF PRODUCTION MANAGEMENT PROJECT

Producer : RAYMOND CYRENNE

Veterinarian : POPLAR VALLEY ANIMAL CLINIC

III. Breeding Report

Bull Battery	1986 ****	1987 ****	1988 ****
Age of Bull #1	0	0	3
Age of Bull #2	0	0	5
Age of Bull #3	0	0	2
Age of Bull #4	0	0	2
Age of Bull #5	0	0	0
Was breeding SOUNDNESS Done	No	No	Yes

LIST OF CATTLE SPECIALISTS

Veterinary Branch, Saskatchewan Agriculture,
4840 Wascana Parkway, Regina, S4S 0B1

Lowes, Dr. Norman	Veterinary Pathologist	787-6426
Rempel, Dr. Peter	Director	787-6423
Yong, Dr. Choon	Veterinary Pathologist	787-6427

WESTERN COLLEGE OF VETERINARY MEDICINE

Department of Veterinary Microbiology, 966-7210

		Room No.
Allen, Dr. J.R.	Parasitology	2615
Saunders, Dr. J.R.	Bacteriology (Head)	2309
Durham, Dr. P.	Virology	2617

Department of Veterinary Physiological Sciences, 966-7347

Blakley, Dr. B.R.	Toxicology	2325

Department of Veterinary Internal Medicine, 966-7084

Radostits, Dr. O.M.	(Head)	2531
Smart, Dr. M.	Trace Minerals	1414

Department of Veterinary Pathology, 966-7280

Clark, Dr. E.G.	Pathology	2559
Doige, Dr. C.E.	(Head)	1625
Jackson, Dr. M.	Clinical Chemistry & Hematology	2563
Orr, Dr. J.P.	Pathology	1627
Schiefer, Dr. H.B.	Toxicology	4104.3
Searcy, Dr. G.P.	Clinical Chemistry & Hematology	2561
Vanderkop, Dr. M.A.	Pathology	1631

Department of Herd Medicine and Theriogenology, 966-7145

Armstrong, Dr. K.R.	Dairy Medicine; Mastitis	1408
Barth, Dr. A.D.	Semen Evaluation	2503
Cates, Dr. W.F.	Bovine Reproduction	2501
Janzen, Dr. E.D.	Feedlot, Cow/Calf Herd Medicine	2416
Mapletoft, Dr. R.J.	Embryo Transfer	2539
Smart, Dr. J.N.	Dairy Medicine & Herd Health	2415

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Hutchings, Dr. D.L.	Immunology
MacNeil, Dr. J.D.	Head, meat chemical residue analysis
Tessaro, Dr. S.V.	Diseases of wildlife, & game ranched species, pathology
Yates, Dr. Wm.	Director

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Harland, Dr. R.J.
Watts, Dr. T.
Willson, Dr. P.

FEED TESTING LABORATORY

Mr. Vern Racz	Director	966-5620	GENPB 113
Dr. Graham Steacy	Nutritionist	966-4132	TRAILER 4
Dr. Bob Maltman	Extension Nutritionist	966-5620	GEN. 108

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UNIVERSITY OF SASKATCHEWAN

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Christensen, Dr. Dave	Basic nutrition	966-4152	AN SC 136
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Gooneratne, Dr. Ravi	Mineral metabolism	966-4136	TRAILER 4
Laarveld, Dr. Bernard	Beef and dairy physiology and metabolism	966-4160	AN SC 206A
McKinnon, Mr. John	Beef cattle nutrition	966-4137	TRAILER 4
Nicholson, Dr. Hugh	Beef production and nutrition	966-4156	AN SC 130
Schmutz, Dr. Sheila	Animal Breeding and Genetics	966-4153	
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Nicholson, Dr. Ray	Farm business management	966-4016	326
Rosaasen, Dr. Ken	Agricultural policy, agricultural marketing and extension specialist	966-4017	332
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BEEF UPGRADING MANAGEMENT PROGRAM

INTERIM REPORT, APRIL, 1988

Great effort has been expended in the past year in familiarizing participants with the program and in the process of data collection, with a good response from participants.

Of the original thirty-one producers in the program, (29 production units as defined by program policy), four declined to continue for various reasons. All of these had submitted no or almost no data. To maintain the size of the program as much as possible, two new veterinarians and producers joined and a third veterinarian was permitted a producer substitution.

Data collection began in the Fall of 1986 but, where possible, data from the Spring of 1986 was solicited to gain the entire calf crop year to establish baseline production. In most cases, however, 1987 was the first complete year of data collected.

The individual animal records collected to date have been analyzed by the Beef R.O.P. computer program. In addition, production indicators relevent to the commercial beef producer have been established and presently are calculated manually. It is anticipated that these calculations will be performed through an independent computer program (GOLD) later this year.

In 1986, data was submitted by twenty-seven of twenty-nine participants. Of these, twenty-three were suitable for computer analysis by March 31, 1988. Those reports still pending were mostly delayed because some essential information could not be gained by telephone or mail but required on-farm visits to elicit.

In 1987, data was submitted by twenty-eight of twenty-nine participants as of March 31, 1988, of which twenty were suitable for analysis and seven more will be suitable by May. Producers and their veterinarians were also asked to work through a Spring and Fall herd information summary and the calculation of production indicators. The response was better than expected; twenty-one returns were received. This herd information will be processed through the GOLD computer program being developed by Mr. Keith LePoudre, Beef Specialist, Saskatchewan Agriculture.

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Significant improvements were made in the area of data collection and analysis in the past year:

1. A sample worksheet to record individual animal records was mailed to B.U.M.P. veterinarians.
2. Spring and Fall herd information sheets were developed. These are intended to help producers sort out herd records to arrive at the calculation of production indicators. The indicators can then by compared to performance targets.
3. Performance targets and a trouble-shooting guide were collated and sent to participating veterinarians to aid in the identification and remedying of problem areas.
4. A core list of specialists with whom veterinary practitioners can consult has been developed.
5. A beef management program was included in the Saskatchewan Veterinary Medical Association annual meeting in September. Speakers included Dr. Ed Duren, Dr. Chris Belan, Al Hingston and Sandy Lauder. Approximately 40 veterinarians attended.
6. Where data collection has been difficult due to producers' lack of time and familiarity with record-keeping, the services of a field technician (Mr. Jack Gamble, Saskatchewan Agriculture) have been employed. This has facilitated data collection as well as orienting producers to make full use of worksheets and returned reports.
7. The GOLD computer program is being developed to analyze key areas of herd information. The emphasis is on growth, open cows, length of calving season and death losses. These key areas are being compared for first calf heifers, second calf cows and mature cows within a given herd. The analysis will be expanded, tentatively by the Fall of 1988, to include, e.g. graphics of calving distribution. Participants with complete data could receive up to a three year comparison of herd performance.
8. Some suggestions for the improvement of the Beef R.O.P. computer program have been brought to the attention of Mr. Gerry Bowes, R.O.P. Program Manager for the Saskatchewan Livestock Association. He is attempting to make the worksheets more meaningful for commercial beef producers desiring individual cow records.

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The Beef Upgrading Management Program has been very helpful in identifying the frustrations common to all beef herd health programs and their attempts to institute meaningful record-keeping. The problems fall broadly into two categories, on-farm and data analysis.

On-farm problems include:

1. Orienting producers to record-keeping.
2. Demonstrating how records help improve production.
3. Veterinarians in single-person practice lack the time to introduce record-keeping to producers.
4. The beef herd is often secondary to other areas of the farm enterprise.
5. Animal identification is hampered by eartag loss on rough terrain.
6. Inventory control is still not important to some producers.
7. Keeping individual animal records is perceived to be of interest to purebred breeders only.

Problems in the area of data analysis have usually resulted because the Beef R.O.P. computer program used was originally developed for purebred breeders:

1. Commercial producers cull for different reasons which are not necessarily addressed by this computer program.
2. Some of the production indicators used in the Beef Uprgrading Management Program are already present in the R.O.P. computer program but the whole section could be expanded and clarified to the benefit of all users.
3. The computer analysis is only as good as the raw data from which it is developed and can only be improved by educating producers about record-keeping and providing technical assistance as needed.

Results and Discussion

Most commercial beef producers find records the most onerous part of a herd management program. Unique individual animal identification takes considerable effort and money to begin and to maintain. Individual animal records are similarly laborious. Producers on the beef Upgrading Management Program kept individual records but not without protest. In general, it seems producers would be much more likely to comply with inventory-style records and so the upcoming Beef Production Management Program is based on this system. It is expected that producers will want to progress to identifying individual animals later when the records demonstrate the effect of maintaining poor performers, e.g. a prolonged calving season and its effect on average weaning weights.

Similarly, veterinarians find supervising clients' record-keeping to be time consuming and not financially rewarding. Their services would be better utilized in discussion, analysis of the records and herd management planning.

Producers must also realize that the analysis of their records can only be as accurate and informative as the raw data they submit. This program ran with both on-farm and off-farm data integrity control. Similar field technical services, at least in establishing herd inventories, may be needed on an ongoing basis.

Veterinarians on the program soon learned that demonstrating a production advantage to a given management technique does not guarantee its adoption. Herd management takes time and since cattle are often a secondary farm enterprise, the herd receives less management time than it requires. Further, decisions are often made on the basis of concerns other than production. It is now apparent that management decisions shouldn't be made on production alone. The financial and marketing implications must also be considered. These latter concerns were beyond the scope of the Beef Upgrading Management Program but deserve further attention.

The issue of motivation arises in every herd management program. Despite the best efforts of any other member of a herd management team, if the producer does not really wish to change his management, no improvements emerge. In fact, an unmotivated producer is more likely to respond to the influence of what the neighbour is doing than to a reasoned analysis of his

own herd performance.

Motivated producers will use the best management program available to them and will make positive changes with it. If they run small herds, they probably do not need a formal record-keeping system, but do need help seeing production trends within the herd. These producers need rapid, detailed record analysis at least twice in the production cycle (post-calving and post-weaning) to make their management decisions. They want regional data to compare their herds to and they would like nutritional and financial packages tied into overall herd management.

The Beef Upgrading Management Program was a small program (thirty producers) and though some of its producers were among the best in Saskatchewan, it demonstrated the need to pursue an commercial beef herd management program. Given the size of this program, its influence on Saskatchewan's commercial beef industry is negligible.

If the ultimate goal is increased efficiency in the industry, we must respond appropriately to the motivated producers who want to make a management program work. If they need detailed record analysis within 36 - 48 hours to make decisions crucial to their livelihood, rapid analysis should be given top priority. These producers set regional standards of good herd performance; they are the best advertising available for a beef production management program.

Conclusions and Impact on Saskatchewan Agriculture

Records are crucial to a beef production program but individual animal records are too complex to be widely accepted by producers. Inventory style records are much more practical to begin with.

Individual records also necessitate unique individual animal identification. This is lacking in most Saskatchewan herds.

Because the commercial beef herd is often a secondary farm enterprise, it was necessary to focus on the key production management indicators. The producer and his veterinarian can add to the basic program later to gain more detailed information.

Management decisions should be based on financial and marketing trends in addition to production trends.

The needs of motivated producers must be met if a beef production management program is to have an impact on the efficiency of the commercial beef cattle industry.

The study proved that the veterinarian is the key specialist in the management of cow-calf operations. The veterinarian provides technical skills like pregnancy testing and bull evaluation while also supplying detailed information for disease control and vaccination programs. The farmer will also require veterinary expertise to help analyze the management and tailor make a program for each individual producer. The motivation will be given through showing records and veterinary consultation do improve production.

A policy for Beef Production Management is the final result of the Beef Upgrading Management Program. This project is designed to assist all beef producers in improving management. (See enclosure).

Saskatchewan Agriculture

Policy

Veterinary Branch
4840 Wascana Parkway
REGINA, Saskatchewan
S4S 0B1

POLICY FOR THE BEEF PRODUCTION MANAGEMENT PROJECT

Effective: April 1, 1988

Saskatchewan

A. Purpose

1. To determine if a producer-veterinarian team approach to beef production management is the key to increased productivity.
2. To improve the productivity and profitability of Saskatchewan beef producers by encouraging use of management, diagnostic and advisory services provided by veterinarians.
3. Establish individual producers on a record keeping system to help measure progress in improving management.

B. Regulations

1. This policy will be administered by the Veterinary Branch, Saskatchewan Agriculture which will be responsible for setting the number of commercial and purebred herds enrolled.
2. Cow/calf herds must have 25 breeding animals or more.
3. Record requirements include two consultations by a practicing veterinarian, the first of which must be on-farm. From the data collected, herds can be analyzed for the four key indicators: growth, open cows, length of calving and death loss. Once the data has been completed, then recommendations can be made to improve production in the herd. Individual animal records improve guidelines for making management decisions so producers are encouraged to supply these records.
4. The cow/calf producer will be required to submit the data and calculation of spring and fall management indicators. These are the records that will be required by the veterinarian and producer to make better management decisions and focus on areas for improvement.

C. Assistance Provided

1. The maximum department contribution in a year is $250.
2. Payment for beef operations will be made on completion of accompanying data and indicator sheets.
3. Payment for the previous year is based on submission of Spring, Fall and Breeding sheets to the Veterinary Branch before March 31st.

VETERINARY BRANCH
4840 Wascana Parkway
REGINA, Saskatchewan
S4S 0B1

BEEF PRODUCTION MANAGEMENT POLICY

Application for Enrolment

Date _____

I, _____ of _____
Name Address

_____ residing in R.M. #_____
Phone

hereby make application for enrolment under the Beef Herd Health Policy. My veterinarian is _____ of
Name

_____, _____.
Address Phone

I have read the terms and conditions of this policy and agree to abide by the obligations as outlined.

Applicant rating _____

_____ _____
Signature of Veterinarian Signature of Herd Owner

Saskatchewan Agriculture

Beef Production Management Project

Spring Sheet 1: Data

Herd Record Sheet 19_____ Date completed _____ Identification # _____

A. Length of Calving Period

	First Calf Heifers	Mature Cows	2nd Calf Cows (Optional)
Birth Date of First Calf			
# of calves born first 21 days			
# of calves born second 21 days			
# of calves born third 21 days			
# of calves born fourth 21 days			
# of calves born fifth 21 days			
# of calves born after 15 weeks			
Birth Date of Last Calf Born			

B. Disease and Death Loss in Spring

# of calves born alive			
# of calves born dead			
# of abortions			
# of difficult births:			
pulls			
abnormal presentations			
caesarean deliver			
# of calves that died from:			
birth — 48 hrs.			
3rd - 14th day			
15th - 60th day			
61 day to date of weaning (complete in fall)			

# of calves treated for various diseases after birth	# Treated	# Died
calving difficulty		
scours		
pneumonia		
accident		
other		

explain other diseases: _____

# of cows died over winter _____ during calving _____

C. Spring Treatment Program

Date _____ # of calves _____

Implant _____, Clostridia _____, Fly tagged _____, Dehorned _____

Castrated _____, Branded _____, Vit A, D & E _____, Dewormed _____

Other _____

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Beef Production Management Project

Spring Sheet 2: Indicators

a. Length of calving season = # of days from 1st to last birth = _____

b. Assisted births: = $\frac{\text{\# assisted births}}{\text{\# of cows calving}} \times 100 =$ _____%

c. Calf crop (first 42 days): = $\frac{\text{\# of calves born first 42 days}}{\text{\# of cows wintered}} \times 100 =$ _____%

d. Abortion rate = 100 - ($\frac{\text{\# of cows calving in the spring}}{\text{\# of pregnant cows wintered}} \times 100$) = _____%

e. Calf sickness rate = $\frac{\text{\# of calves treated}}{\text{\# of calves born alive}} \times 100 =$ _____%

f. Calf death loss:

i) Death loss at birth = $\frac{\text{\# of calves born dead}}{\text{total \# of calves born}} \times 100 =$ _____%

ii) Death loss 0-48 hrs = $\frac{\text{\# of calves died 0-48 hrs}}{\text{\# calves born alive}} \times 100 =$ _____%

iii) Death loss 3-14 days = $\frac{\text{\# of calves died 3-14 days}}{\text{\# calves born alive}} \times 100 =$ _____%

iv) Death loss 15-16 days = $\frac{\text{\# of calves died 15-60 days}}{\text{\# of calves born alive}} \times 100 =$ _____%

v) Death loss 61-weaning (calculate in fall) = $\frac{\text{\# of calves died 61-weaning}}{\text{\# of calves born alive}} \times 100 =$ _____%

I affirm that the above information is complete and correct to the best of my knowledge.

Date _____ **Producer** _____

Veterinarian _____

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Beef Production Management Project

Fall Sheet 1: Data

Herd Record Sheet 19_____ Date completed _____ Identification # _____

A. Growth Information (Actual _____ or estimated _____ weights)

Date calves weaned_____

	First Calf Heifers	Mature Cows	2nd Calf Cows (Optional)
# of heifers weaned			
# of bulls/steers weaned			
Average weaning wt. for heifers			
Average weaning wt. for bulls/steers			

Fall Treatment Program Date calves done _____ # of calves _____

Implant _____, Clostridia _____, Dehorned _____ Castrated _____, Branded _____

Item _____, IBR, P13 (BVD) _____, Warbles _____, Vit A, D & E _____, Other _____

B. Additional Cow Data

of cows culled before winter feeding?_____

Reasons for culling	# of First Calvers	# of Mature Cows
not pregnant or late		
disease problem		
physical problem		
herd reduction		
poor production		

# of cows died over summer_____

# of cows going into winter?_____

Average weight of cows at weaning?_____lbs (actual_____estimated_____)

Cows weights range from _____ to _____ lbs

Treatement Program

Cows - Vibrio _____, Scours _____, IBR _____, BVD _____, Fly tagged _____,

Warbles _____, Vit A. D & E _____, Other _____

C. Nutritional Information

Were feed samples sent in to the Feed Test Lab for analysis? _____

Were rations balanced using the data from the Feed Test Lab? _____

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Fall Sheet 2: Optional Data and Indicators

A. Information From Individual Records (Optional)

I. Cow Age and Production

Cow Age (years)	Number of Cows	Actual Weaning Weight	Adjusted Weaning Weight
2			
3			
4			
5			
6-10			
over 10			

II. Comparison of Calf Weights According to Birth Date

Calving intervals on 21 day basis	# of calves	Actual Weaning Weight	Adjusted Weaning Weight
1			
2			
3			
4			
5			
6+			

B. Calculation of Fall Indicators

a. Fall pregnancy rate 100 - (# of open cows / # of cows exposed to bulls x 100) = _____%

b. Fall pregnancy rate for heifers 100 - (# of open heifers / # of heifers exposed x 100) = _____%

c. Late calves rate = # of cows to calve after cut off date / # of heifers exposed x 100 = _____%

d. Weaning rate = # of calves weaned / # of cows wintered x 100 = _____%

e. Average weight of calves total weight = total weight / # of calves weaned = _____lb

f. Calf weaning weight to cow wt. ratio = Average weight of calves / Average weight of cows at weaning x 100 = _____%

g. Length of breeding season = # of days cow is exposed to bull = _____

I affirm that the above information is complete and correct to the best of my knowledge.

Date _____ **Producer** _____

Veterinarian _____

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Beef Production Management Project

Breeding Data Sheet

A. Bull Battery (Complete this part in spring)

#	Breed	Age
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Was breeding soundness evaluation (including semen check) done before breeding season?_____

B. Breeding Season (Complete in fall)

Date bulls turned out _____

Date bulls brought in _____

Disease or injury problem with bulls? _____

Were heifers bred separately from main cow herd?

Breeding dates from _____ to _____

C. Pregnancy Data (Complete in fall)

	Replacement Heifers	First Calf Heifers	Mature Cows
# diagnosed pregnant	_____	_____	_____
# diagnosed open	_____	_____	_____
# diagnosed late	_____	_____	_____

(If pregnancy data is not available (you did not preg check) calculate pregnancy rate the next spring based on "cows wintered" and "calves born".)

D. Bull Treatment Program (Done at various times of year)

Vaccination: Vibrio _____, IBR/PI3 _____, Other _____

Fly tagged _____, Dewormed _____, Warble _____, Lice _____,

Other _____

Papers and Talks

1. Saskatchewan Veterinary Medical Association meeting - September, 1986.

2. Beef Production Meeting - September, 1987.

3. Regional Veterinary, Extension Meetings - October, 1987.

4. Individual talks were given to Stockgrowers Association, Extension Branch and What's in Stock for You.

5. The B.U.M.P. project is the test model for the Beef Production Management Project. There have been many presentations and consultation meetings.